REMARKS

The Office Action dated July 13, 2007 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

In accordance with the foregoing, claims 1 and 2 have been amended to more particularly point out and distinctly claim the subject matter of the invention and claims 7-8 have been added. No new matter is being presented, and approval and entry are respectfully requested. Support for the amendments to claim 1 can be found, at least, in steps ST5, ST7, ST10, and ST11 of FIG. 2 and corresponding description provided in the Specification. For instance, from page 11, line 13, the Specification describes how the position of a hand is determined by using the skin color. Support for the new claims 7 and 8 can be found in the specification, from page 10, line 19 to page 11, line 5 and page 14, lines 22-25, for example. As will be discussed below, it is also requested that all of claims 1-8 be found allowable as reciting patentable subject matter.

Claims 1-8 are pending and under consideration.

REJECTION UNDER 35 U.S.C. § 102:

Claims 1, 2, 4, and 5 were rejected under 35 U.S.C. § 102 as being anticipated by U. S. Patent No. 5,802,494 to Kuno ("Kuno"). The Office Action took the position that Kuno describes all the recitations of independent claim 1 and related dependent claims. This rejection is traversed and reconsideration is requested.

Independent claim 1, upon which claims 2-8 are dependent, recites an image transmission system for a mobile robot, including a camera for capturing an image as an image signal, a microphone for capturing sound as a sound signal, and human detecting means for detecting a human from the captured sound. The system also includes human detecting means for detecting a human from the captured image and/or sound, a power drive unit for moving the entire robot toward the detected human, and image cut out means for cutting out an image of the detected human according to information from the camera. The system includes image transmitting means for transmitting the cut out human image to an external terminal. The human detecting means includes means for detecting a moving object as a human from the image signal obtained from the camera, means for extracting an outline of the moving object, means for extracting a face inside the outline of the moving object, means for detecting a position of a hand by searching for a skin color area other than the face inside the outline of the moving object, means for recognizing a gesture and/or posture of a human based on a positional relationship between the face and the hand, and means for detecting a human according to the gesture and/or posture.

As will be discussed below, Kuno fails to disclose or suggest the elements of any of the presently pending claims.

Kuno describes, as shown in FIG. 3, a data-acquiring section 1 comprising a robot 5, a fixed video camera, an illumination lamp, a speaker, and the like. See col. 3, lines 33-36. The robot 5 has a video camera in its head, a microphone and a speaker mounted on

its head, and a display on its trunk as shown in FIG. 4. The video camera takes pictures of the subject sick in the bed in the sick room. The microphone detects any speech the subject utters. The speaker gives the messages to the subject, which a physician makes in the monitor room.

However, Kuno does not teach or suggest, at least, "a power drive unit for moving the entire robot toward the detected human," as recited in independent claim 1. Rather, from the description and figures provided in Kuno, the robot 5 is positioned in front of or next to the patient so the facial features may be detected and monitored. Instead, column 24, from line 6, of Kuno describes that the robot 5 can move its arms and hands, touching the bed or the subject. However, nothing in column 24 provides that the robot 5 has a driving mechanism to move the entire robot toward the detected human. As submitted above, the robot 5 is placed by a human in front of the patient.

Furthermore, in step c1 of Kuno, pixels which may represent part of the subject's head are extracted. See column 8, lines 17-26. In other words, the pixels are distinguished from those representing the pillow, bed sheet and blanket. If the video camera 31a incorporated in the robot 5 is a color camera, the pixels of skin color and hair color are extracted from the pixels of other colors. If the camera 31a is a monochrome one, the pixels showing part of the **subject's head are distinguished** from those representing the bedding, in accordance with the brightness or texture of pixels. (Emphasis added) Therefore, Kuno processes the pixels of skin color and hair to be able to distinguish the patient's head, not to detect the position of the patient's hand.

Specifically, Kuno fails to teach or suggest, at least, "means for detecting **a position of a hand** by searching for a skin color area **other than the face** inside the outline of the moving object," emphasis added, as recited in independent claim 1. Based "on a **positional relationship between the face and the hand**," independent claim 1 provides "means for recognizing a gesture and/or posture of a human." (Emphasis added) Such feature is not taught or suggested in Kuno. Kuno does not teach or suggest a determination of a positional relationship between the face and the hand, where the position of the hand is detected by searching the skin color area. Rather, Kuno provides that the robot 5 detects the head of the patient and if the patient has moved from the bed. See column 9, lines 50-53. The robot 5 can also analyze the face features of the patient to determine if the subject is facing or facing away from the camera (See column 13, lines 1-9) and is demonstrating an abnormal feature (See column 14, lines 24-39). The description of Kuno does not anticipate all of the features recited in independent claim 1.

Accordingly, it is respectfully asserted that Kuno fails to teach or suggest all the recitations of independent claim 1 and related dependent claims 2-8. It is respectfully requested that the rejection to the claims be withdrawn.

REJECTION UNDER 35 U.S.C. § 103:

Claims 1, 2, 5, and 6 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Publication No. 2004/0028260 to Higaki et al. ("Higaki") and Kuno. The

Office Action took the position that Higaki and Kuno disclose all the aspects of claims 1, 2, 5, and 66. The rejection is traversed and reconsideration is requested.

Because the combination of Higaki and Kuno must teach, individually or combined, all the recitations of the base claim and any intervening claims of the dependent claims, the arguments presented above supporting the patentability of independent claim 1 over Kuno are incorporated herein.

As submitted in the Declaration under 37 CFR § 1.131 filed concurrently herewith, U.S. Publication No. 2004/0028260 to Higaki et al. ("Higaki") filed August 7, 2003 and published February 12, 2004 is not prior art as to any aspects of U.S. Patent Application Serial No. 10/814,343. Higaki's filing date and publication date are after the filing date of Japanese Patent Application No. 2003-094171 which relate to the subject matter of the present application, U.S. Patent Application Serial No. 10/814,343. Therefore, the filing of Japanese Patent Application No. 2003-094171 corresponding to the present application establish conception of the invention prior to the effective date of Higaki coupled with due diligence from prior to said date to a subsequent filing of the U.S. Patent Application Serial No. 10/814,343.

Accordingly, Higaki is excluded from being used to reject the present application. Because the rejections cannot stand without Higaki, it is respectfully requested that the rejections be withdrawn.

For the reasons explained above, it is respectfully submitted that the rejections of all of claims 1, 2, 5, and 6 are moot because Higaki may not be used as prior art against

the present application and because Kuno fails to teach or suggest all the recitations of claims 1, 2, 5, and 6 for the reasons set forth above. It is therefore respectfully requested that all of claims 1, 2, 5, and 6 be allowed, and that this application be passed to issue.

Claim 3 was rejected under 35 U.S.C. § 103 as being unpatentable over Higaki, Kuno, and further in view of U.S. Publication No. 2000/326274 to Shinichi ("Shinichi"). The Office Action took the position that Higaki, Kuno, and Shinichi disclose all the aspects of claim 3. The rejection is traversed and reconsideration is requested.

As will be discussed below, Higaki, Kuno, and Shinichi fail to disclose or suggest the elements of any of the presently pending claims.

Because the combination of Higaki, Kuno, and Shinichi must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 3, the arguments presented above supporting the patentability of independent claim 1 over Kuno are incorporated herein. For the reasons previously discussed, Higaki is excluded from being used to reject the claims of the present application.

Shinichi generally describes an acting robot in which an image input device 1 inputs an image of one of cameras of a stereo-camera to a man detecting device 2, and inputs the images of both cameras to a distance calculating device 3. The man detecting device 2 detects a man by image processing, and extracts a face area of the man to follow up the face area thereafter. A man distinguishing device refers the information on an image of the man stored in a man information storing part 5, and a voice input device 6

consists of three microphones attached to a body, and outputs the inputs to a voice source direction detecting device 7. An obstacle detecting device 10 calculates a distance value to an obstacle of every ultrasonic wave sensor 9 and holds the same, and a touch sensor 11 distinguishes a rubbed state and a tapped state and outputs the same.

However, Shinichi does not cure the deficiencies of Kuno. Similarly to Kuno, Shinichi does not teach or suggest, at least "a power drive unit for moving the entire robot toward the detected human," emphasis added, as recited in independent claim 1. Rather, from the description and figures provided in Shinichi, the image input device 1 inputs the image of one of cameras of a stereo-camera to a man detecting device 2, and inputs the images of both cameras to a distance calculating device 3. Similarly to Kuno, there is no description or suggestion in Shinichi that a position of a hand is detected "by searching for a skin color area other than the face inside the outline of the moving object," as recited in independent claim 1 and that a gesture and/or posture of a human is recognized "based on a positional relationship between the face and the hand," as also recited in independent claim 1.

Accordingly, it is respectfully asserted that Kuno and Shinichi fail to teach or suggest all the recitations of independent claim 1 and related dependent claim 3. It is respectfully requested that the rejection to the claims be withdrawn.

Claim 4 was rejected under 35 U.S.C. § 103 as being unpatentable over Higaki, Kuno, and further in view of U.S. Patent No. 6,278,904 to Ishii ("Ishii"). The Office

Action took the position that Higaki, Kuno, and Ishii disclose all the aspects of claim 4. The rejection is traversed and reconsideration is requested.

As will be discussed below, Higaki, Kuno, and Ishii fail to disclose or suggest the elements of any of the presently pending claims.

Because the combination of Higaki, Kuno, and Ishii must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claim 4, the arguments presented above supporting the patentability of independent claim 1 over Kuno are incorporated herein. Ishii, in turn, generally describes a floating device allowing an entire robot main body to float at a side. For the reasons previously discussed, Higaki is excluded from being used to reject the claims of the present application.

Ishii generally describes floating device, which allows an entire robot main body to float at a site. Mounted on the floating device are an image sensor which captures image data of persons around the robot main body. An information processing device recognizes a specified person based on the image data captured by the image sensor, calculates a position of the specified person, and outputs a control signal for moving the robot main body toward the position of the specified person.

However, Ishii is silent on how the position of a hand of the specified person is determined. Specifically, Ishii fails to teach or suggest, at least, "means for detecting a position of a hand by searching for a skin color area other than the face inside the outline of the moving object," as recited in independent claim 1. Similarly to Kuno, Ishii is

devoid of any teaching or suggestion providing the features associated with the means for detecting as recited in independent claim 1. The floating robot 10 of Ishii does not teach or suggest detecting a position of a hand by searching for a skin color area other than the face inside the outline of the moving object. As a result, similarly to Kuno, a person of ordinary skill in the art will appreciate that Ishii is silent as to teaching or suggesting, "means for recognizing a gesture and/or posture of a human based on a positional relationship between the face and the hand; and means for detecting a human according to the gesture and/or posture," as recited in independent claim 1.

Furthermore, contrary to the contentions made in previous Office Actions, in view of the descriptions of Kuno, a person of ordinary skill in the art would not be motivated to combine the floating device of Ishii with Kuno.

MPEP 2143.01(V) states "THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE," (Capital letters in original.) and explains that "If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." Moreover, MPEP 2145(III) states that "the claimed combination cannot change the principle of operation of the primary reference or render the reference inoperable for its intended purpose." The proposed combination of Kuno and Ishii would change the fundamental principles of Kuno's operation, and, thus, is per se non-obvious under MPEP 2143.01(V).

It is evident that Kuno's patient monitoring system could not be configured to add a mechanism allowing a patient to float in the water and having an entire main body to float at a side as provided in Ishii. Accordingly, the proposed combination is improper, unmotivated hindsight reconstruction.

Accordingly, Applicants respectfully request that the rejection of claim 4 be withdrawn because the combination does not teach or suggest all the features of independent claim 1 and related dependent claim 4 and is per se non-obvious and because there is no proper motivation to combine the references, and thus a *prima facie* case of obviousness has not been established.

CONCLUSION:

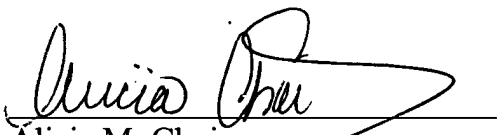
In view of the above, Applicants respectfully submit that the claimed invention recites subject matter which is neither disclosed nor suggested in the cited prior art. Applicants further submit that the subject matter is more than sufficient to render the claimed invention unobvious to a person of skill in the art. Applicants therefore respectfully request that each of claims 1-8 be found allowable and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the Applicants respectfully petition for an appropriate extension of time.

Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Verified Translation of JP 2003-94171
Declaration Under 37 CFR § 1.131